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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/658,618	09/08/2000	Hiroki Ogata	SCEI 3.0-030	3345

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EXAMINER

NELSON, ALECIA DIANE

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 05/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/658,618

Applicant(s)OGATA ET AL. **Examiner**

Alecia D. Nelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. ***Claims 1, 3, 4, 6-9, 14, 16 and 17*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Copper et al. (U.S. Patent No. 5,485,171).

With reference to the **claims 1, 4, and 16-17** Copper et al. teaches a control apparatus (1) comprising a controller (3) which can be pressed and operated (see column 5, lines 50-53), a detecting device (transducer, 15) for outputting an analog signal corresponding to the pressing operation of the controller, an A/D converting unit

for converting the segmented analog signal into a digital signal in accordance with the one of the plurality of levels (see column 9, lines 43-51), and a segmenting range setting unit for setting a range of output levels of the analog signal wherein the plurality of levels into which the analog signal segmented within the range which is set by the segmenting-range setting unit (see column line 61-column 10, line 5). With further reference to **claim 6**, there is taught a comparator for comparing the range of the voltage level with the limit value (see column 9, line 60-column 10, line column 10, line 50). With reference to **claims 7-9**, Copper et al. teaches that switch caps (19) are made of a plastic or other material and so arranged that deformation of the cap or a portion thereof must occur in order to operate one of the switches (see column 6, lines 36-50).

Copper et al. fails to specifically teach the usage of a level segmenting unit or a segmenting-range setting unit, however does teach a variance in voltage as related to applied pressure and a set voltage range between 0 V and a maximum voltage determined by circuit parameters. With further reference to **claims 3 and 14**, Copper et al. fails to specifically teach that the segmenting-range setting unit comprises a storing unit for the plurality of levels and that the entertainment device also has a storing unit for storing the plurality of levels. Copper et al. teaches that the disclosed invention could be applied to sound equipment, personal computers, or video recording and playback equipment (see column 1, lines 19-24), wherein a microprocessor whose software is stored in a ROM, controls the functions of the receiver including receiving and verifying data streams from the transmitter, and also decoding position and stats

information. The information is translated and the signals are sent to the host computer. It is also taught that the transmitter comprises a microcontroller (22) containing a ROM for storing functions of the transmitter, and well as teaching that the voltage levels ranging from 0 to a maximum voltage as determined by circuit parameters, which would make it obvious to use a storing unit for storing the predetermined voltages provide by the pressure sensitive resistor used in an entertainment system.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention for a device similar to that which is taught by Copper et al. to include a level segmenting unit and a segmenting-range setting unit for providing a set range of voltage levels which relate to applied pressure to a detecting device in order to provide the corresponding signals to a processor for controlling a computer system. This thereby, providing intermediate levels between the maximum and minimum voltage to control the displayed object for better interaction between the user and the system.

3. **Claims 2, 5, 10-13, and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Copper et al. in view of Armstrong (U.S. Patent No. 6,208,271).

With reference to **claims 2 and 10**, Copper et al. teaches all that is required as explained above with reference to **claim 1**, however fails to teach that the switch provides a digital signal with a plurality of bits or a single bit which is connected to the A/D converter. With reference to **claims 11-13** teaches that switch caps (19) are made

of a plastic or other material and so arranged that deformation of the cap or a portion thereof must occur in order to operate one of the switches (see column 6, lines 36-50).

Armstrong teaches that each state, whether two (On or OFF) or three (Off, first On state and second On state) (see column 10, lines 57), of the dome cap sensor can be associated with an individual bit or digital assignment (see column 15, lines 63-65). Armstrong also teaches that the switch (keypad, 62) is connected to circuitry (70), which includes additional circuitry (72) being an A/D converter (see Fig. 20).

With reference to **claims 5 and 15**, Copper et al. teaches all that is required as explained above with reference to **claim 1**, however fails to teach that the segmenting range setting unit is a volume device that is inserted in the power line of the detecting device for determining the range of output levels.

Armstrong teaches the usage of a meter (26) including an electromagnetic coil engaged to a moveable indicating needle adjacent a printed scale or range gauge and capable of showing varying conductivity across the sensor (10). Armstrong also teaches that with sufficient pressure, and varying pressure well within a range readily applied by a human finger, the sensor (10) will be moved to first second states with increasing applied pressure, and the different states in this example, because it's an analog circuit, will be indicated by the needle of the meter (26) being positioned left, right or at various states in between on the scale (see column 13, lines 20-68).

Therefore it would have been obvious to allow the switch to provide digital signals and to provide a volume device as taught by Armstrong in a device similar to that which is taught by Copper et al. in order to provide a pressure-sensitive analog

sensor which can supply the user with a tactile feedback on activation, as well as de-activation, of the sensor. Providing the user with the tactile feedback will thereby reducing the amount of confusion on the part of the user as to when the sensor is actuate and de-actuated.

Response to Arguments

4. Applicant's arguments filed 3/19/03 have been fully considered but they are not persuasive. The applicant argues that Copper et al. fails to teach the claimed invention because Copper et al. fails to teach a level segmenting unit, an A/D converter for converting a segmented analog signal and a segmenting range setting unit. Further the applicant argues that it would not be obvious to one having ordinary skill in the art to add both the level segmenting unit and the segmenting range setting unit as claimed to the invention of Copper et al. However, there are numerous suggestions made throughout the disclosure of Copper et al. stating means for generating a command signal indicating at least one of the direction, intensity, and duration of pressure applied wherein the applied pressure in a given orientation corresponds to a change in the voltage on the legs of the transducer which can be converted into position information on the screen of the computer. Voltage levels reflect the direction and magnitude of force applied by the user and setting a range of movement based upon the information received from the applied pressure. Based on this disclosure it would be obvious to one having ordinary skill in the art that there would be necessary circuitry to carry out these

functions of detecting the applied force, segmenting the signal into a plurality of levels, and setting a range between which the levels fall as suggested by Copper et al. Furthermore, the examiner fails to see anything in the disclosure of Copper et al., which specifically teaches that the signal is not segmented into different levels before being received by the A/D converter. Specifically, Copper et al. states that the position information is derived from a voltage taken from the potentiometers which is dependent on the force and position of pressure applied to the resistance element through disc (13) and which is read by A/D converter attached to each resistance element and from a duration counter which is incremental on each iteration of the control loop during which the disc has been held down. Therefore the rejection to the claims will be maintained and this action is made final.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alecia D Nelson whose telephone number is (703)305-0143. The examiner can normally be reached on Monday-Friday 9:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras can be reached on (703)305-9720. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-9700.

adn/ADN
May 24, 2003


CHANH NGUYEN
PRIMARY EXAMINER